(c) directing said first beam onto said test surface to be scattered by said test surface with data having a minimum signal frequency component;

(d) delaying the second beam by a period of time which is greater than an inverse of the minimum signal frequency component;

(e) directing at least a portion of said scattered first beam and the delayed second beam on an adaptive beam combiner, the adaptive beam combiner emitting two beams which are in quadrature and respectively equal to the difference of the respective optical phases of the scattered first beam and the delayed second beam and the difference of the scattered delayed second beam and the first beam with one of the emitted beams possessing an optical wavefront equivalent to the first scattered beam and with the other of the emitted beams possessing an optical wavefront equivalent to the second delayed beam; and,

(f) directing the beams emitted by the adaptive beam combiner onto respective photodetectors and associated circuitry to result in an electrical output signal that is representative of the vibrating test surface.

In the Abstract:

Please amend the Abstract to read as follows (a marked version of the abstract can be found in the appendix)

--An optical apparatus for coherent detection of an input optical beam. The apparatus includes a beam splitter for splitting the input optical beam into a first component and a second component; an optical delay device arranged to receive the second component, the optical delay device imposing an intentional delay in the second component of the input optical beam; and an adaptive beam combiner coupled to receive the second component with a delay imposed thereon by the optical delay device; and the first component from the beam splitter. The adaptive beam combiner has two exiting components having the same wavefronts and propagating directions as